

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-26 (cancelled).

Claim 27 (new): A borehole treatment composition comprising: an aqueous phase; a non-aqueous oil phase; emulsifiers; and, optionally, further additives, including weighting agents, fluid loss additives, viscosity regulators, wetting agents, salts, biocides, corrosion inhibitors and an alkali reserve: the non-aqueous oil phase comprising at least one member selected from the group consisting of

- a) paraffins having from 5 to 22 carbon atoms, and
- b) internal olefins having from 12 to 30 carbon atoms in the molecule, in admixture with
- c) carboxylic acid esters of the formula $R-COO-R'$, where R stands for a linear or branched, saturated or unsaturated alkyl radical having from 15 to 25 carbon atoms and R' denotes a saturated, linear or branched alkyl radical having from 3 to 22 carbon atoms; wherein, the ratio of the toxicity of internal olefins of chain length C16/C18 (standard IO) to the toxicity of the non-aqueous oil phase, in each case as measured by the *Leptocheirus plumulosus* acute, static 96 hour/10 day sediment toxicity test (in accordance with ASTM E 1367 – 92 & EPA/600/R-94/025, Section 11), is less than 1.

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Claim 28 (new): The borehole treatment composition of claim 27, in the form of a water-in-oil (W/O) emulsion.

Claim 29 (new): A drilling mud comprising the borehole treatment composition of claim 27.

Claim 30 (new): The borehole treatment composition of claim 27, wherein, the weight ration of the aqueous phase to the non-aqueous oil phase is from 50:50 to 1:99.

Claim 31 (new): The borehole treatment composition of claim 27, wherein, at least 50% by weight of the oil phase comprises a) and/or b) and c).

Claim 32 (new): The borehole treatment composition of claim 27, wherein, component a) comprises at least one member selected from the group consisting of linear and branched paraffins having from 10 to 21 carbon atoms

Claim 33 (new): The borehole treatment composition of claim 27, wherein, component b) comprises at least one member selected from the group consisting of internal olefins having from 14 to 24 carbon atoms.

Claim 34 (new): The borehole treatment composition of claim 27, wherein, component c) comprises esters of the formula $R-COO-R'$ in which R stands for saturated or unsaturated linear alkyl radicals having from 15 to 23 carbon atoms and R' denotes a linear or branched saturated alkyl radical having from 6 to 22 carbon atoms.

Claim 35 (new): The borehole treatment composition of claim 27, wherein, in addition to the esters in the composition comprise not more than 15% by weight (based on the oil phase) of esters with radicals R having more than 23 carbon atoms.

Claim 36 (new): The borehole treatment composition of claim 27, wherein, 100% by weight of the non-aqueous oil phase comprises: a) and/or b) and c).

Claim 37 (new): The borehole treatment composition of claim 27, wherein, at least 50% by weight, of the non-aqueous oil phase, comprises an admixture of b) and c).

Claim 38 (new): The borehole treatment composition of claim 27, wherein, in addition to a), and/or b) and c) there are further, environmentally compatible, water-insoluble components present.

Claim 39 (new): The borehole treatment composition of claim 27 further comprising esters of C1-C5 monocarboxylic acids with monofunctional and/or polyfunctional alcohols, the monofunctional alcohols having at least 6 carbon atoms and the polyfunctional alcohols having from 2 to 6 carbon atoms per molecule.

Claim 40 (new): The borehole treatment composition of claim 27, wherein, the non-aqueous oil phase further comprises at least one secondary ester selected from the group consisting of propyl carboxylate, butyl carboxylate, pentyl carboxylate, hexyl carboxylate, heptyl carboxylate, octyl carboxylate, nonyl carboxylate, decyl carboxylate, undecyl carboxylate, dodecyl carboxylate, tridecyl carboxylate, tetradecyl

carboxylate, pentadecyl carboxylate, hexadecyl carboxylate, heptadecyl carboxylate, octadecyl carboxylate, nonadecyl carboxylate, eicosyl carboxylate, uneicosyl carboxylate, doeicosyl carboxylate and isomers thereof, wherein the secondary esters each have a carboxylate group of 1 to 5 carbon atoms.

Claim 41 (new): The borehole treatment composition of claim 27, wherein, the non-aqueous oil phase has a pour point of below 0°C.

Claim 42 (new): The borehole treatment composition of claim 27 in the form of an oil-based drilling mud of the W/O type having a plastic viscosity (PV) in the range from 10 to 70 mPas and a yield point (YP) from 5 to 60 lb/100 ft², measured in each case at 50°C, wherein, the non-aqueous oil phase has a Brookfield viscosity at 0°C of not more than 50 mPas.

Claim 43 (new): The composition of claim 27 in the form of an oil-based drilling mud of the W/O type; the drilling mud having a plastic viscosity (PV) in the range from 10 to 60 mPas and a yield point (YP) from 5 to 40 lb/100 ft², measured in each case at 50°C.

Claim 44 (new): The borehole treatment composition of claim 27, wherein, the oil phase has an Ubbelohde viscosity at 20°C of not more than 12 mm²/s.

Claim 45 (new): The borehole treatment composition of claim 27, wherein, the aqueous phase has a pH in the range from 7.5 to 11.

Claim 46 (new): The borehole treatment composition of claim 27, wherein, the non-aqueous oil phase comprises blends of components a) or b) and c) in a weight ratio the sum of a) and b) to c) of from 10:1 to 1:1.

Claim 47 (new): The borehole treatment composition of claim 27 comprising a non-aqueous oil phase component b) having a relative toxicity in relation to standard IOs of chain length C16/C18 greater than 1, wherein, c) is present in the non-aqueous oil phase to reduce the relative toxicity.

Claim 48 (new): The borehole treatment composition of claim 27 in the form of an invert drilling mud with low toxicity.

Claim 49 (new): A method for reducing the toxicity of an oil phase of an invert drilling mud having an oil phase containing at least one member selected from the group consisting of paraffins and internal olefins which comprises: including in the oil phase esters of the formula $R-COO-R'$ in which R stands for a linear or branched, saturated or unsaturated alkyl radical having from 15 to 25 carbon atoms and R' denotes a saturated, linear or branched alkyl radical having from 3 to 22 carbon atoms for the toxicity of the oil phase measured by the *Leptocheirus plumulosus* acute, static 96 hour/10 day sediment toxicity test (in accordance with ASTM E 1367 – 92 & EPA/600/R-94/025, Section 11).

Claim 50 (new): A drilling mud comprising an aqueous phase and a non-aqueous oil phase, emulsifiers and, optionally, further additives, comprising at least one member selected from the group consisting of weighting agents, fluid loss additives, viscosity regulators, wetting agents, salts, biocides, corrosion inhibitors and an alkali reserve, wherein, more than 50% by weight of the non-aqueous oil phase comprises esters of the formula $R-COO-R'$ in which R stands for a linear or branched, saturated or unsaturated alkyl radical having from 15 to 25 carbon atoms and R' denotes a saturated, linear or branched alkyl radical having from 3 to 10

carbon atoms, the non-aqueous oil phase of the drilling mud having a relative toxicity, i.e. the ratio of the toxicity of internal olefins of chain length C16/C18 (standard IO) to toxicity of the non-aqueous oil phase, in each case measured by the *Leptocheirus plumulosus* acute, static 96 hour/10 day sediment toxicity test (in accordance with ASTM E 1367 – 92 & EPA/600/R-94/025, Section 11), of less than 1.

Claim 51 (new): A method for improving the lubricating properties of drilling muds which comprises: adding to the drilling mud, esters of the formula $R-COO-R'$ in which R stands for a linear or branched, saturated or unsaturated alkyl radical having from 15 to 25 carbon atoms and R' is a saturated, linear or branched alkyl radical having from 3 to 10 carbon atoms the drilling mud comprising an aqueous phase and a non-aqueous oil phase, emulsifiers and, optionally, at least one further additive, selected from the group consisting of weighting agents, fluid loss additives, viscosity regulators, wetting agents, salts, biocides, corrosion inhibitors and/or an alkali reserve.

Claim 52 (new): A method for reducing the amount of structuring agent based on clays with or without chemical or physical treatment in a drilling mud, containing an aqueous phase and a non-aqueous oil phase which comprises: incorporating in the drilling mud a structuring agent reducing amount of esters of the general formula $R-COO-R'$ in which R stands for a linear or branched, saturated or unsaturated alkyl radical having from 15 to 25 carbon atoms and R' denotes a saturated, linear or branched alkyl radical having from 3 to 10 carbon atoms.

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Claim 53 (new): The borehole treatment composition of claim 37, wherein, at least 80% by weight of the non-aqueous oil phase comprises the admixture of b) and c).

Claim 54 (new): The borehole treatment composition of claim 33, wherein, the internal olefins have up to 20 carbon atoms.

Claim 55 (new): The borehole treatment composition of claim 30, wherein, the weight ratio of the aqueous phase to the non-aqueous oil phase is from 30:70 to 20:80.